

Tennessee Pollution Prevention Partnership Success Story



GM-Spring Hill
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Torit Filter Recycling and Reuse

The Member

GM-Spring Hill Manufacturing Facility is a highly integrated automotive manufacturing and assembly complex of over seven million square feet. Approximately 5,700 Spring Hill team members are involved in producing spaceframe components and body panels, painting vehicles, machining and assembly of engines and transmissions, vehicle assembly, warehousing for retailer parts, and ancillary activities. The facility produces Saturn ION sedans and coupes and the VUE compact SUV.

The Story

Air filtration systems that use cartridge air filters are used extensively in site operations. The air filtration systems filter particulate matter that is generated from building ventilation and plant production activities, such as welding. The filters are changed on a regular basis, as indicated by pressure differential, requiring approximately 2,000 filters per year. In the past, used filters were collected in roll-off containers and landfilled after one use.

The Success

Over several months in 2004 and early 2005, GM Spring Hill Manufacturing teams, including Facilities Management, Environmental Services, and Purchasing worked with filter management suppliers to implement cleaning and reuse of Torit dry dust filters.

Current practices indicate these filters can be refurbished two to five times before disposal.

Filters are removed and transported to a filter management supplier. When received, the filters are cleaned using a sequence of compressed air, vacuum, vibration, and rotation to completely clean the filter. The filter is inspected and tested, and sent back for reuse. Particulate waste collected is handled according to all internal and external requirements.

To implement this change, removed filters had to be handled with due care (vs. depositing in a waste roll-off), the cleaned filters had to meet quality and performance requirements, and cleaned filters require storage on-site.

Significant filter purchase savings are realized – a 30% savings each time a filter is cleaned as compared to the purchase price of a new filter, over \$25,000 total per year. This project supports GM global waste goals through waste elimination and reuse within GM processes, and it is being implemented at other GM locations.

The Pollution Prevented

An average reduction of eighteen (18) tons of landfilled filter material per year is realized.

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